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THOMAS G. NEWMAN,
EDITOR.

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EDITORIAL BUZZINGS.

"**There is** a language in each flower
That opens to the eye;
A voiceless but a magic power
Doth in earth's blossoms lie."

A Dark, Warm Room is the best place in which to keep comb honey, in order to preserve its whiteness, and keep it from "gathering moisture." The temperature should be kept from 80 to 85 degrees.

Home-Made is the term claimed by two bee-papers. The editor of the *Review* is its compositor, foreman, "devil" and proof-reader in his own office, and his wife and children assist in getting the papers into the mails. The editor of the *Bee-Hive* fills all the offices mentioned, and does all the mechanical work as well. The work of each one reflects credit upon these brother editors. We wish them both success.

Mr. R. J. Kendall, with whose communications from Texas our readers were familiar 2 or 3 years ago, went to New Zealand and now has gone to Australia. His departure is thus noticed by the August number of the *Australasian Bee Journal:*

We are sorry to state that our friend and contributor, Mr. Kendall, has left for fresh fields. He has for some time contemplated returning to the United States, but finally made up his mind to try Victoria first, and left for Melbourne last month. Feeling very unsettled of late prevented him contributing to the *Journal* regularly, but he has promised to take up the running again as soon as he gets settled and has had time to see how things in the bee line are moving in Victoria. We shall be very pleased when that time comes, for Mr. Kendall is a very pleasant and amusing writer. We wish him every success.

Feeding Back, so called, is feeding the bees with extracted honey in sufficient quantity to induce them to finish up incomplete sections, in order to make them marketable. This has often been tried, but the loss of honey is so great that it is quickly given up in disgust.

The Virginia champion of "the Wiley lie" is persistent in his assertions that bee-keepers are feeding glucose to the bees for the purpose of having them deposit it in the combs and seal it up, so that the bee-men may put upon the market a fraudulent article of comb honey, and thus accommodate Wiley, Evans & Co., by giving them a shadow of excuse for their *cheap* but untruthful assertions concerning the existence of adulterated comb honey and of its being found upon the markets in large cities.

The price of the pure article of extracted honey and the best glucose is now very nearly the same, and for that reason it will not pay to adulterate extracted honey. As Wiley, Evans & Co. are driven from that position, they now want to find some glucosed comb honey on the market. But if the feeding back of pure extracted honey to make comb honey is an unprofitable business, the substitution of glucose (which is of about equal value) will not help the case! Both are alike unprofitable! Both are, therefore, commercially impracticable and financially impossible! Both "horns of the dilemma" refuse to support, or even to give color to the "vain imaginations" of these deluded mortals!

Commenting upon the experience of Mr. W. Z. Hutchinson in "Feeding Back," as given in the *Review*, of recent date, the *British Bee Journal* for Aug. 23, remarks as follows:

Ten or twelve years ago we experimented on feeding extracted honey to complete sections, but we soon found out that such a practice *would not pay at all*, and that it could only be done by an enormous waste of honey.

The experience of the most successful bee-keepers in America corresponds with that of our British cousins, and the uniform verdict is that *it will not pay to do so!*

Thus are the enemies of the pursuit of bee-keeping again beaten back! again made to "bite the dust"! again proven to be making cheap assertions concerning that of which they are in entire ignorance!—again exposed to public gaze as villifiers and traducers of an honest pursuit! and again and again we demand that they shall produce a sample crate of the article—or else acknowledge that their assertions are *falsehoods*, without excuse and without the least shadow of proof.

A Carton—which is a cover for a one-pound package of comb honey, is received from Mr. J. B. Hains, Bedford, O. It has a neat front, and on the back is a view of his apiary, and a selection from our Leaflet entitled "Why Eat Honey?" It is neat, attractive and withal inviting and instructive.

That New Invention a Failure.—On page 148 an announcement was made that Mr. Koerbs, a German, had invented a new comb; and on page 244 we stated that it was merely comb foundation "made on glass, wood, tin, card-board or other material, with the impression of cells in wax on one side, the other being left smooth." The intention is to have the cells of double length, the mid-rib or foundation being at one side.

Notwithstanding the fact that several bee-keepers of Germany had stated that they approved the invention, and our friend, C. J. H. Gravenhorst, editor of the *Bienen Zeitung*, had seen the combs "completed by the bees," and predicted a "revolution" in the matter of bee-comb, "even if the invention accomplishes but one-half of what is claimed by Mr. Koerbs"—still we made these remarks:

A great "splurge" was made at its announcement. There was a great ringing of the bell to announce the advent of the locomotive, but, alas, the coming of the engine created no enthusiasm. It is almost a useless affair, if not absolutely so. Here in America, at least, we have no use for such an invention! We can secure longer cells by simply spreading the combs, but even that is undesirable, because of the slower ripening of the honey, and the consequent hindrance to the bees.

We shall watch this matter closely, and keep our readers posted concerning its advent and revelation—and ring the bell just in time for all to witness the arrival of the locomotive!

Now comes this "conclusion," in a letter from Mr. Hj. Stallhammar, of Sweden, to the Canadian *Bee Journal:*

As regards the Koerb comb foundation (one-sided, with cells of double-depth), this Summer it has proven itself a failure, the queen filling the cells with eggs before the bees had drawn the cells out long enough; and, furthermore, when fastened on the one edge of the frame, the bees are inclined to build a new comb on the other edge of the same frame.

We had no confidence whatever in the invention, and so stated it at the time of its very peculiar announcement. Nothing else than a complete failure ought to have been expected by its friends.

The Honey Crop in California has been misrepresented by the Commercial *Bulletin*. It stated that "the yield in San Bernardino and San Diego counties will be the heaviest ever gathered." This does not conform with advices received in San Francisco, and the *Country Merchant* says that a local dealer who has just returned from a trip to Southern California, after making a careful canvass of the field in person, reports the yield of the counties in question will be, from present prospects, only about half that realized in 1886, and that in other sections of the State indications are that the proportion will be no greater.

The fact is, somebody has been trying to *bear* the market. But in spite of all such work the prices of both comb and extracted honey will *go up!*

GLEANS OF NEWS.

Bees as Educators.—Mrs. L. Harrison, in the *Prairie Farmer* of last week, gives the following very interesting article on the above subject:

EDUCATED EYES.—No sooner does a person become the owner of a colony of bees than he looks around to see what are the prospects of future gain. Heretofore he drove or rode along the highways, noticing the ruts, bridges, fences and houses, but now his vision takes in a wider range. His observation is quickened, and trees, shrubs and plants have put on new life, as it were, to his enlivened faculties. From the first opening buds in spring, until the last rustling leaf has fallen, his interest never lags, as he constantly watches the opening flowers, and notes with pleasure the busy workers roaming over them in quest of treasure to store in their hives.

NECTAR IN WEEDS.—What was to him once a useless weed, to be cut down with the scythe, or whacked off with a hoe, is clothed in beauty, and becomes a priceless treasure. Whoever saw any beauty in the figwort, or watched for the appearance of its tiny cupboard, looked down into their depths for the first appearance of sparkling nectar, but a bee-keeper? Or whoever saw any utility in Spanish-needles, or beggarticks? There is a bond of friendship existing between the bee-keeper and nectar-bearing plants, and they appear to spring up to greet him wherever he goes. The Indian calls white clover "The White Man's Foot," and well he may, for its modest flower soon appears as the harbinger of peace and plenty.

SOILS.—The interest thus awakened in plants, soon takes on a wider range, and extends to the soil. Seeds of sweet clover (melilot) are scattered on gravelly soil, take root, penetrating deeply, keep it from washing and dying and add to its fertility. Dreary wastes thus become clothed with verdure, adding to the beauty of the landscape and yielding choice nectar, fit food for gods. On a recent trip of a dozen miles on a railroad leading out from this city, we were agreeably surprised to find this plant growing luxuriantly nearly the whole distance, and some deep cuts were so covered with it that the soil couldn't be seen. It is to be hoped that the officers of railroads will appreciate the utility of this plant in keeping the soil from washing away and preventing damage and danger thereby, and foster its growth. I have seen the yellow variety of this plant growing on the borders of salt marshes on the shores of Long Island Sound.

MOISTURE.—Marshes and wet lands along rivers and water courses, come in for a share of attention by the bee-keeper. His eye quickly detects anything in the interest of his winged stock. If by digging a ditch and running off water the growth of favorite bee-plants is promoted, it is done. He then benefits his neighbors as well as himself, for, as the ground becomes dry, blue-grass and the clovers will take root, thus promoting grazing for stock, and malaria will disappear. New plants will spring up as if by magic, the button-bush (Cephalanthus occidentalis) growing in water. It seems as if the seeds of honey-plants rattled from the bee-keeper's clothes. The seed of many honey-plants is food for birds, which are our friends and co-workers in destroying many noxious insects.

EDUCATED EARS.—As seeing is cultivated by bee-culture, so is hearing—even all the senses are quickened, much better than they can be in a kindergarten. How soon the trained ear discovers the note of the robber, the sound of swarming, the piping of queens, and the happy hum of plenty, or the sorrowful moan, when the queen is lost. The sense of smell reveals the blooming of apples, as also the opening of the fragrant basswood, buckwheat, etc., and reveals the presence of that dire calamity, foul brood.

Bee-keeping is, therefore, not only a pleasant and profitable employment, but it tends to lift up and exalt the intellect, and educate the human senses.

Pleasantries.—Prof. Cook, on page 602 of this issue says that "the Wiley *lie*" was not a "scientific pleasantry"—there was nothing scientific about it. Instead of that, it was only a "glaring, mischievous error," clothed in "the garb of science!" The Professor is evidently correct. It is a libel to call it "scientific."

The Professor also gives some very emphatic decisions on honey being "digested nectar," and Mr. Paul L. Viallon, Bayou Goula, La., has sent us these criticisms on the matter, which came to hand since the page was "made up," which contains the Professor's article. He says:

I think Mr. Demaree gives us a pretty good "pleasantry" when he says on page 568: "Pure honey is nectar of flowers gathered by bees and reduced to proper consistency by the internal heat of the bee-hive. That's the whole of it." Will friend Demaree please to theorize on that question, and not let it remain in that crude state? As for the other part of the subject, he hits the nail pretty well.

Chapman Honey-Plant.—Mr. R. Bacon, Verona, N. Y., on Aug. 31, 1888, asks the following questions about the seed of the above-named plant:

Please inform me as to when is the best time to gather the seed from the Chapman honey-plant, and how to clean it. I obtained a small package of the seed, which I planted, and I find it to be one of the best—if not *the best*—of honey-plants. I believe that if bee-keepers would club together, and plant a large area with it, it would add immensely to our annual honey crop. I say "club together," for it will hardly pay one bee-keeper to plant it for all the surrounding apiarists, but all should help in bearing the expense, as all would reap the benefits.

We refer this question to Mr. H. Chapman for reply, which will probably appear in our next issue. Seed can be obtained at this office.

Another Bee Story.—The following is taken from the Chicago Daily *News*, and was sent to it by telegraph from Martin's Ferry, O., on Sept. 4, 1888. The bees must have been very numerous down there to have done so much cleaning up in so short a time. It says:

Mr. G. N. W. Stringer, a well-known and reliable farmer on Deep run, was in town to-day and told this wonderful bee story: Yesterday Mrs. Stringer boiled down forty gallons of cider to ten gallons, put it in four tin pans, and set them on a table out-of-doors to cool, covering the pans with a table-cloth. Five hours later she went to the table to take the cider in, and, much to her surprise, discovered that the bees had emptied every pan, sipping the cider through the table-cloth.

A Peculiar method of dispensing sweetness has been discovered by Mr. J. W. Tefft of New-York, as will be seen by the following "notice" from the East Syracuse, *News* of Sept. 1, 1888. It says:

Mr. J. W. Tefft of Collamer will please accept our thanks for his liberal donation of several sections of honey last week. Among the number was one marked "For the Office Devil," with Mr. Tefft's compliments. Upon receiving the gift and immediately after testing the quality, the devil enquired as to the geographical position of Mr. Tefft's residence upon the globe. Our devil is quite an ingenious chap and we would not be surprised if he should invent a device to make honey for the girls, as they were among his most frequent callers during the past week.

The Northwestern Bee-Keepers' Society is usually held in Chicago during the last week of the Exposition. This year the North American Convention is to be held at Columbus, Ohio, on Oct. 3 to 5, and thus comes so close to the time for holding the one at Chicago, that it is, by some, thought best to omit it altogether. So many of the members feel unlike making the outlay for attending it, after three years of failure of the honey crop. If it is held at all, the better time would be at the time of the Fat Stock Show. The officers would like to hear from the members on this point.

Mr. F. Cheshire says that the rearing of a bee, from the egg to maturity, costs a colony the equivalent of four cells of honey; and it is only because a bee, in a fair yield, is able to requite the colony with many times its cost, that a large population means surplus; but if this population is brought upon the stage after the harvest is over, it becomes a consuming instead of a producing population. Hence the importance of having the brood-rearing about over when the honey-flow is at its best.—*Exchange.*

How to Test Drinking Water.—One of the simplest ways of testing drinking water is to purchase a small quantity of saturated solution of permanganate of potassium from the druggist and put a few drops of it into a bottle of drinking water. This will turn the water a beautiful rose color, but if the water contains any dangerous amount of organic matter, in a few hours the water will change to a dirty reddish-brown. If the color of the water remains unchanged at the end of twelve hours it may be considered comparatively pure. A yet simpler way of testing the water is to put a half teaspoonful of pure sugar into a clean pint bottle, three-quarters full of water, cork the bottle, set it where it is warm for two or three days and where it will not be disturbed. If, during this time, the water becomes cloudy or milky, it is unfit for household use. If it remains perfectly clear, it is safe.—*N. Y. Tribune.*

Convention Notices.

☞ The North American Bee-Keepers' Society will meet at Columbus, O., on Wednesday, October 3, 1888, and continue as usual in session for three days. W. Z. HUTCHINSON, *Sec.*

☞ The next meeting of the Union Bee-Keepers' Association will be held at Clayton, Ills., on Thursday and Friday, October 11 and 12, 1888, in the Town Hall at 10:30 a.m. The Park Hotel will charge $1.00 per day; the restaurants 25 cts. per meal. We expect Messrs. Dadant, Hambaugh, Camm and other prominent bee-keepers to be present.

S. N. BLACK, *Pres.*

Honey Locust.—We have just received from Mr. Norman J. Coleman, Commissioner of Agriculture, the "Annual Report of Forestry for 1887," issued by the Department at Washington. It contains many things of interest concerning the forest trees, etc., of America. Concerning the Honey Locust it gives these interesting particulars and description:

Distribution.—From the Brazos River, eastern Texas, northward to eastern Nebraska and eastward throughout the entire region to the Atlantic, but in the latter States chiefly introduced. It is mostly associated with other trees, elm, walnut, hickory, and ash, though sometimes becoming the predominant species, and in a few cases, in small areas, excluding all other species. Outside of its natural range it has been quite generally cultivated as a shade and ornamental tree, and in a few of the Western States successfully grown in forest plantations. It is well fitted to replace the Black Locust in the southern half of the United States, where it can undoubtedly be more successfully grown as a forest tree.

In 1700 it was introduced into England, but cultivated only as an ornamental tree, and somewhat unsuccessfully as a hedge-plant, as it was also upon the Continent. Subsequently it became known in southwestern Europe, especially in France, Austria, and Italy, where fertile seeds are easily matured.

Growth.—The Honey Locust grows rapidly during its early life in favorable situations, making from 2 to 3 feet annually in height growth, and nearly three-fourths of an inch in diameter for the first ten years. Although not as extensively tried as a forest tree as the Black Locust, yet so far as known it is generally far less liable to the attacks of insects than the latter. Commonly about 50 to sometimes 90 feet in height and 1½ to 3 feet in diameter. Grown in the open it usually produces a short trunk and a broad, much-branched crown, while closely grown with other heavy-foliaged companions it develops a taller trunk and smaller crown.

Soil and Site.—The Honey Locust is found growing almost entirely in low, rich bottom-lands and in sheltered valleys, where the soil is deep and loose, rarely of its own accord taking to the poorer and drier uplands. In such favorable locations it produces its finest timber value. The moderately rich, but loose, sandy, or gravelly soils of highlands and slopes produce desirable timber, though not as quickly as the lower and richer soils. The growth in stiff damp soils is apparently a healthy one, but slow and undesirable for timber; it will not endure an undrained soil.

Propagation.—It does not sprout from the stump nor grow from cuttings, and is therefore propagated entirely from the seed, which will sometimes retain their vitality for three years, even out of the pods. The fresh seed procured in the fall grow most readily if planted immediately, but if kept dry for a season or more and then planted they germinate very slowly, often not at all, or "lie over." The young plants of the first year are not quite as hardy as those of the Black Locust of the same age, but are equal to them in this respect at any time afterwards. They can be transplanted to their permanent sites when one year old and will bear the transplanting well, but are on the whole, perhaps, best kept in the nursery rows till the fall or spring following the second year.

Quality of Wood and Economic Uses.—The wood is heavy, hard, strong, and durable in contact with the soil or when exposed to the weather (equal to that of Red Mulberry). It splits somewhat more readily than that of the Black Locust, and the grain is considerably coarser as well as being more porous. It seems not to have attracted much attention for its economic value, but where available is employed considerably for fence-posts, rails, in turnery for heavy spoke-timber, and is much esteemed for fuel. It is adapted to other purposes in construction, and will undoubtedly come into more general use in the absence of other heavy-wooded but much slower-growing kinds.

The Honey Locust Tree.

Descriptive Characters.—leaves compound, composed of small, lance-shaped, oblong leaflets. Pods large, flat, shiny brown, 9 to sometimes 18 inches long and about 1½ inches broad, with a sweetish hard pulp between the seeds—often eaten by children. Armed with clusters of long keen spines, generally three together, a central or main one with smaller lateral ones; often attached to the trunks of young trees, but absent from older stems. The

Honey Locust Limb, Seed and Pod.

bark of young trees (ten to fifteen years) is mostly smooth and unbroken; but very old trees have rough and much furrowed bark, rendering the tree quite a different one in appearance. Varieties of this species are without thorns, or sometimes with small thorns.

The locusts are excellent honey-producers and should not be overlooked in the selection of shade trees. Although the duration of bloom is but limited, they yield a bountiful supply of rich nectar, and bees will literally swarm among the highly-perfumed blossoms. Mr. G. W. Demaree, of Kentucky, writes as follows regarding the locust:

"The time of year in which it blooms nearly filling the interval between the late fruit bloom and the white clover, makes it an exceedingly valuable auxiliary to the honey harvest in the middle states, if not elsewhere. It is a most profuse honey bearer, rivalling the famous linden in quality, and only inferior to the product of the latter in color. Locust honey cannot be said to be dark in color. It is of a rich pale-red color, when in a liquid state; but when in the shape of comb honey, its appearance, if removed from the hive when first finished, is but little inferior to our superior clover honey. It becomes exceedingly thick, if left with the bees till the cells are thoroughly sealed, and its keeping qualities are therefore most excellent. The trees are planted by the side of fences, in waste places, and on poor, worn-out lands. They may be propagated from the seeds, or by transplanting the young trees from one to three years old. If the ground is plowed in the spring, and the locust seeds planted on the hills with corn, or with other hill crops, and cultivated the first year, the young trees will grow with great rapidity, even on very poor lands. In this way beautiful groves can be started, making the land, in process of time, very valuable, in locations where timber is an object, besides giving a perfect sea of bloom, ladened with precious nectar."

The Honey Crop is very small this season, especially the white honey. More honey is now being gathered than at any time before, this year. Mr. Geo. H. Knickerbocker of Pine Plains, N.Y., remarks thus:

With these conditions a good quality of honey must, of necessity, bring a good price, unless the market is demoralized. I already hear of some who live in favored localities, and have a fair crop of honey, who are making the mistake so common among bee-keepers, viz: being in such a hurry to dispose of their honey as soon as gathered (before someone else can get theirs ready for market), they offer nice comb honey for 10 or 12 cts. per pound, and by so doing help to establish a low price, even when honey is a short crop and should bring a *good price*, in order to fairly remunerate the producer for his labor and investment.

The foolishness of such proceedings cannot be too severely condemned. If honey does not bring an extra good price this year, it is the fault of the producers themselves. Even those who may have some of last years' crop of comb honey are to be congratulated, for it will also find a market at good prices.

We Have some copies of the old edition of Cook's Manual left, which we will sell at the old price, $1.25. The price of the new edition is $1.50 per copy; a notice of which may be found on page 579.

We Want 20,000 subscribers. Out of the 300,000 bee-keepers in America, certainly this is not an extravagant desire! It is only one out of every fifteen! We confidently ask those who appreciate the AMERICAN BEE JOURNAL, to show it by sending us one or more new subscribers. We will give them full value for their money.

QUERIES & REPLIES.

Why Queen-Cells do Not Hatch.

Written for the American Bee Journal

Query 574.—My bees came out of winter quarters in very good condition, with the exception of one colony that starved to death, and another that was queenless. I have had 3 very good swarms, the first on June 9. To the queenless colony I gave a comb of eggs and brood, and they made two queen-cells, but neither of them hatched. From the colonies that swarmed first, I took a comb and adhering bees containing a nice, sealed queen-cell; but it never hatched. I have given them another comb containing two queen-cells; they have now had time to hatch, but I have not examined them. What do you suppose is the reason that queen-cells do not hatch here? I have kept them well supplied with bees from other colonies.—Iowa.

Candidly, I do not know.—G. M. DOOLITTLE.

The most probable cause of the trouble was that the brood got chilled. —J. P. H. BROWN.

I can offer no explanation that would be of use.—A. J. COOK.

I do not know; perhaps they got chilled.—C. H. DIBBERN.

I think there was not a sufficient number of bees to keep the cells warm. —R. L. TAYLOR.

It is impossible to give a correct answer without knowing all the circumstances.—P. L. VIALLON.

Laying workers probably infested the hive, which are at times very hard to dethrone.—J. M. HAMBAUGH.

Why do you not see if the last cells have a queen or not? If not, break up the colony and unite it with others.—H. D. CUTTING.

You leave too many things in the dark. Did the queens die in the cells? Did the bees destroy the cells? I can give no opinion in the absence of fuller information.—M. MAHIN.

I cannot say, unless they got chilled. The position of queen-cells is usually the coldest part of the hive, and unless the weather is warm, or the colony strong, that may often happen in such cool summers as this.—EUGENE SECOR.

From the data given, I am unable to answer. There are so many reasons that might be given, none of which might be right, that it is useless to attempt to make a reply.—J. E. POND.

Possibly they were chilled, but I have found dead grubs in queen-cells when I thought they had hardly been chilled, and I did not know the cause of death. —C. C. MILLER.

Such colonies are often infested with laying workers, and the young queens are destroyed on their return from their bridal tour. Are you positive that the queens died in the cells?—MRS. L. HARRISON.

There are various reasons why queen-cells do not hatch. Not knowing more of the conditions, I cannot answer in your case. There is no certainty of any queen-cell hatching; that is the reason why all those who used to advocate clipping all the queen-cells but one to prevent after-swarming, were writing a great deal more than they practically understood.—JAMES HEDDON.

Possibly the queen-cells were not handled carefully. I think that many queens, just after the cells have been sealed, may be entirely destroyed by shaking the frames, as we do when clearing them of bees. In this case the queen brood must either have been defective or destroyed by bad handling.—J. M. SHUCK.

No reason can be given why the cells did not hatch if the bees did not abandon them, and leave them to be chilled and destroyed by a too low temperature. I am inclined to think that the cells hatched, and the young queens were destroyed by the bees. Bees that have been queenless a long time are liable to act as though they had laying workers among them, whether you see any signs of these pests or not. This peculiar abnormality among bees is the prevailing cause of the loss of young queens at the time, and before their wedding flight.—G. W. DEMAREE.

In the absence of fuller details, it would be almost impossible to state the cause for the queen-cells not hatching. They may have been chilled, or laying workers might have interfered, or something else may have been the cause.—THE EDITOR.

Bees Stinging the Capping of Cells.

Written for the American Bee Journal

Query 575.—I notice that Mr. L. B. Clifton, in the *Southern Farm*, gives it as his idea that bees, after filling their cells with honey and capping them, insert their sting in the center and deposit some formic acid to protect the honey from fermenting. Now my idea was, that they left it uncapped until all the water evaporated, thereby keeping it from fermenting. What is your idea? I want to hear from older bee-men than I am. I ask this for information.—Georgia.

I more than doubt Mr. Clifton's theory.—M. MAHIN.

Stinging the honey is all "bosh."—R. L. TAYLOR.

I think your idea is as good as any.—H. D. CUTTING.

In my opinion, the *sting* performs no part in ripening honey.—G. M. DOOLITTLE.

My opinion is the same as your own. —J. M. HAMBAUGH.

I have heard this assertion years ago, but I have failed yet to see anything of the kind.—P. L. VIALLON.

I do not believe that formic acid is deposited in it. If that is so, why does extracted honey that has never been capped not ferment when evaporated artificially?—MRS. L. HARRISON.

I think that the formic acid theory, put in the honey by the bees using their sting, is a grand humbug. Your idea is the better of the two.—EUGENE SECOR.

We think that Mr. L. B. Clifton is fond of wild theories. They do not always leave it until evaporated, and that is why some honey bursts the cappings.—DADANT & SON.

I do not know, but I am somewhat skeptical about bees ever using their stings for any other purpose than as weapons of war.—C. C. MILLER.

We have no proof that bees *insert their sting* and deposit formic acid in the honey, although there is some formic acid present in nearly all honey. —J. P. H. BROWN.

The above idea is all theory, and to my mind utter nonsense; at any rate, it is all guess-work, and almost any Yankee could guess better.—J. E. POND.

I do not believe in the formic acid idea. I believe that the only use the bee makes of its sting is for defense. Bees do not generally cap the cells till the honey is sufficiently evaporated to keep.—C. H. DIBBERN.

Well, I am quite an old bee-man, and have put in most of my time studying apicultural queries that came rather closer to my dollar-and-cent success, so I will not try to give instruction about what I do not understand.—JAMES HEDDON.

I think that idea is a myth. There is formic acid in the honey, which is doubtless the result of digestion. How do the stingless bees of hot climates acidulate their honey?—A. J. COOK.

My "idea" is, that I never saw it done, and that I do not believe it is done. At our county horticultural meeting last week, a bee-keeper made the same statement, and also that the bees did the capping "with their stingers." I think that he never subscribed for a bee-periodical. If formic acid has to be put into honey to prevent its fermenting, when is it put in honey that is extracted before being capped?—A. B. MASON.

I believe it has been established that there is formic acid in honey. I incline to the believe that the acid formed in honey is developed and incorporated with the honey in the honey-stomach, and tends to preserve the nectar till it ripens, rather than to preserve it after it has been evaporated and sealed.—J. M. SHUCK.

When Mr. Clifton writes in that way he is simply repeating one of the many "scientific pleasantries" with which our bee-literature abounds. There is not a shadow of truth about it. Honey contains more or less of formic acid, but it gets there by absorption from the effluvium rising from the heated cluster of bees. Perhaps this is a wise provision of nature—certainly it is the most natural process by which such an end could be accomplished.—G. W. DEMAREE.

Formic acid is found in the honey, no matter whether it is capped by the bees or extracted before being capped —therefore the "theory" advocated by Mr. Clifton is without foundation. He is not the author of the theory, however. Our friend, the Rev. W. F. Clarke, is its sponsor, and if he finds it possible to further defend it, we should like to hear the arguments.—THE EDITOR.

CORRESPONDENCE.

QUEEN-REARING.

In full Colonies, without First Removing the Brood.

Written for the American Bee Journal
BY HENRY ALLEY.

It is supposed that queens reared at swarming-time are superior to those reared by what is called "artificial methods." This point I will not discuss at this time, but will give the results of some experiments which have been conducted in my apiary the present season, in order to induce a colony of bees to build queen-cells without first removing the queen or any of the brood.

On August 15, several of the best colonies in my apiary were put in order, to test this matter of rearing queens in full colonies the same as the bees would do if about to cast a swarm. When it was ready, I found the bees were ready also, and they built the cells just as I expected they would. I must say that I was as much surprised as delighted at the result, to see that my first attempt was a success.

The cells thus built were very large, and the young queens from them are fine and equal to those reared by any method, or by any one. I intend to present several of them to prominent bee-keepers in this country, and have them tested with those reared at swarming-time; others will be placed in my own colonies.

If this new method for rearing queens works as well as it now promises, it will most likely be adopted by nearly all who rear queens in large numbers, as it is the most practical as well as the most economical method yet devised by any one. There is no doubt in my mind, that one colony of bees can be kept at work building queen-cells from May 20 to September 20. There is one colony in my apiary that is now (Aug. 29) at work on the fourth set of cells, and the bees seem to take as much interest, and work on them with the same vigor, as they did on the first lot of eggs given them.

One of the best features about this new method is the fact that the bees build no cells except from the eggs given them; therefore, it will not be necessary to hunt the other combs over, when one set of cells are removed.

It must be evident to all, that this method has a marked advantage over others so long in use, one of the most important of which is in the immense saving in bees, time and honey, as by this method queens are reared, and in so doing the colony need not be disturbed, except when one frame is put in, and removed at the time the cells are capped.

Some one will say, "I thought you did not approve of having one colony build but one set of queen-cells." Well, I do not in cases where the bees are deprived of the queen and all the brood. You must remember that with the new plan the bees are kept at all times in the same condition that they are in when a swarm issues. Now, if bees are kept in that condition, why are they not ready to rear as fine queens as they would if they had intended to swarm? The queen has the freedom of all the combs, and brood-rearing is not stopped for a moment, and thus the colony is kept up to the highest point of activity at all times.

So far as I have any knowledge, no one has ever reared, or has attempted to rear, queens by not depriving the bees of their queen. I am not quite ready to make public the details of this method of rearing queens, but I shall probably do so at the proper time, and in season for those who desire to test it another year.

Wenham, Mass.

THE A B C.

Early Instruction for Beginners —Things Worth Knowing.

Written for the Youths' Companion
BY DR. C. C. MILLER.

"What a beautiful piece of honey! I wonder if it is artificial, or genuine comb-honey made by the bees."

Such remarks as this may often be heard from those who have read the statement which has been going the rounds of the papers, that comb-honey is made by machinery entirely independent of the labor of the honey bees. The story was first started by Professor Wiley who says he meant it as a scientific pleasantry; but error travels faster than truth, and may not be overtaken by it for years.

The truth is that no such thing has ever been accomplished, and I doubt if it has ever been attempted. Mr. A. I. Root made an offer of one thousand dollars for a single pound of honey so made, and although the offer has been standing, if I am not mistaken, for several years, no one has yet called for the money.

When you examine the wonderful workmanship in a piece of honey-comb and observe its great regularity, it seems that there must be some master-builder among the many thousands, whose province it is to direct the acts of the others that the work may go on as one harmonious whole. But if you watch the bees at work you will see nothing of the kind. True, there is a bee called a queen, but the bees do their work without any control on her part. Each bee seems to be working according to its own sweet will, one putting on a bit of wax, another giving it a push here, another there, and the only wonder is, that where so little order or system appears, such wondrously regular workmanship is done.

It is interesting to watch a young worker gnaw its way out of its cell, and become a member of the commonwealth. No mother, nurse nor tutor is on hand to instruct it as to what its duties are to be, and yet that mysterious something, that we call *instinct*, which is born with the bee, seems to tell it exactly what to do, so that the same perfection of workmanship is found in the hive now as thousands of years ago, no improvement from practice. The bee does not seem to learn to do its work, it *knows* without learning.

The first sixteen days of the young worker's life are spent indoors doing house-work and tending baby, and during the rest of its life it is a field worker, bringing in nectar and pollen from the flowers, also water and propolis. During the busy gathering season, the life of a worker is not more than six weeks, and it seems to wear itself out with work, for the old bees are distinguished by their ragged wings.

The name queen is misleading. The queen is not a ruler, she is simply an egg-layer, and is said sometimes to lay her own weight of eggs in twenty-four hours, that is, about three thousand eggs. She does this, however, only when all conditions are most favorable, surrounded by a populous colony, with a copious harvest, for at such times she is bountifully fed by the workers, that can be seen every few minutes offering food to her.

Under ordinary circumstances a queen is doing pretty good work to lay one or two thousand eggs a day, or rather in a day and night, for work in the hive goes on day and night. The workers rather than the queen seem to control the rate at which eggs are laid, for at some seasons of the year, particularly in autumn and winter, the queen is left to forage for herself, and few or no eggs are laid.

The cells in honey-comb are six-sided and of two sizes, one size, worker, measuring five to the inch, and the other, drone, four. If an egg is laid in a small cell it produces a worker, if in a large cell a drone. At certain times a third kind of cell is built, a queen cell. When a colony becomes very populous and contemplates swarming, a number of queen-cells are built, looking not unlike so many peanuts, each queen-cell taking as much wax in its construction as would make a great many drone or worker cells. A queen-cell is not six-sided but round, and the young queen, while in it, has several times as much room as the other young bees.

About ten days before the young queens are old enough to emerge from their cells, the swarm issues. The old queen goes off with the swarm, and when the first young queen hatches, a second swarm is likely to issue, to be sometimes followed in two or three days by a third, and not rarely by a fourth and even a fifth.

The young queens seem to have a mortal antipathy to each other, and as soon as one such queen hatches, her first business is to proceed, if allowed, to destroy her unhatched royal sisters. This she does by digging a hole in the side of a queen-cell, and stinging the inmate in its cradle. If further swarming is contemplated by the workers, they defend the unhatched queens from the attack of the one at liberty, which goes off with the swarm. Previous to going off, however, this young queen may be heard, especially in the still of the evening, uttering a shrill cry, "Pe-e-p, peep, peep," replied to by the

young queens in their cells, "Quahk, quahk."

When no further swarming is intended, all the young queens who are sufficiently matured are allowed to emerge from their cells, and when two of these meet, a deadly combat ensues. One of them stings the other to death, and strangely enough the victor is never injured in the struggle, for neither one stings till she gets in a position to deal a death thrust without danger to herself. In this way the conflict continues till all the queens but one are killed, and those remaining unhatched are despatched in their cradles.

These queen-cells, of which I have been speaking, are usually found on the edges of the comb, and sometimes even on the wood that surrounds the comb. If a hole happens to be in any part of a comb the bees are likely to make use of the space for a queen-cell. If the queen is at any time lost, when no previous preparation has been made for rearing a young queen, a different course is pursued.

The bees select a young larva in a worker-cell, which, under ordinary circumstances, would have produced a worker, enlarge its cell greatly, destroying, if necessary, the adjacent cells for that purpose, feed it lavishly so that the little grub is literally swimming in a sea of food, and in due time it emerges a perfect queen.

If it should happen that nothing but drone eggs are in the hive, the poor bees will try their best to rear a queen from one of these, but it never grows into anything but a drone, and, I think, always dies in the cell. The fact is, there are only two kinds of eggs, drone and worker or queen, for any and every worker egg with the right kind of food and treatment will produce a queen.

The young worker has its rations very accurately dealt out, just enough, and not a particle is left over; but there is no stint in feeding the young queen, and when she hatches out of her cell there is usually enough food (*or royal jelly*, as it is called) left to make one think another queen might have been reared on it.

The time required for hatching out the perfect bee from the laying of the egg is, for the drone twenty-four days, for the worker twenty-one, and for the queen sixteen. Curiously enough, the one that matures the soonest lives the longest, for the queen attains the age of two, three and sometimes five years.

The life of the worker seems to depend on the amount of work it does, in the honey harvest living only about six weeks; but those which are hatched late in summer live over till the next spring. It is hard to tell just how long the drone would live if let alone, for when forage in the fields become scarce he is mercilessly driven from the hive to perish.

The drone is the male and is a lazy scamp, for he not only does nothing toward laying up stores in the hive, but does not even visit the flowers for his own food. He helps himself to the stores gathered by the workers, then flies about for exercise, and comes back with a good appetite for more.

There seems to be a popular impression that a queen is surrounded by a body-guard or a number of courtiers always accompanying her, and ready to attend to her every want, while some have the notion that the queen-cell is a kind of throne where the queen holds court and may be found at all times.

So far is this from being true, the queen-cell is torn down shortly after the young queen hatches out, and before she is two weeks old she commences laying and may be found in any part of the hive.

No bee accompanies her, but if at any time she stops at any point, the workers near her form a circle about her, all facing the queen as if to do her honor. Presently the queen moves on, and the retinue is broken up, to be formed again when she next makes a halt, but the retinue is formed by a fresh lot of workers each time.

Within the past fifty years great progress has been made in bee-culture. Some men take as much pride in their stock of bees as others do in their stock of cattle, and fresh importations are constantly made from other lands, Egypt, Palestine, the Isle of Cyprus, but chiefly from Italy. The Italian bee is distinguished from the common black bee by having three yellow bands upon its abdomen, being more beautiful in appearance and more industrious in character.

I have only touched upon a few points of interest relating to the honey-bee. That the subject is a large one may be judged from the fact that there are published in the English language three weekly periodicals devoted entirely to bee-culture, besides a number published monthly and semi-monthly.

Marengo, Ill.

POOR SEASON.

Some Good Advice about the Fall Care of Bees.

Written for the American Bee Journal

BY CHARLES F. MUTH.

It requires but a small amount of skill and experience to produce a large amount of honey in bee-hives or nail-kegs when the season and surroundings are favorable; we all know that some of our brethren going in favored localities have their egotism tickled more than is necessary when a large crop is realized. Their celebrated hives, inventions of their own; their celebrated methods of manipulation, their fine theories and never-ending arguments, would all drop out of sight with themselves, if they were living in a locality like we "poor chaps" who have had four poor honey seasons in succession.

The season of 1888 is as bad as any we have had, and although I never experienced or heard of a colony of bees starving in the month of August, such things are possible, and it is the object of this article to put my neighbors on their guard.

My bees had, during this season, 8 acres of Alsike clover in their immediate vicinity, and I extracted 150 lbs. from about 20 colonies, which should not have been done, judging by present appearances. I examined my colonies about Aug. 20, and found all strong in bees and brood, but, with a small amount of stores. A June swarm, hived on 10 full combs, had every comb filled with brood in all stages and not a drop of honey. I supplied them at once, as a matter of course. It is a peculiar fact that Italian bees, with a vigorous queen, will fill their combs with brood during a dearth, when with blacks, as a rule, almost all breeding would cease.

My colony referred to above, is now one of the best in my apiary, but would have starved to death in less than 3 days, as a cool, rainy spell set in while the food was still on their hive, lasting for three days or more. There are 20 acres of buckwheat in full bloom, and in view of the apiary, which would not have saved it from starvation.

There are hundreds of colonies of bees in Ohio, Indiana and Kentucky, in a worse condition than mine, which may starve to death between now and the beginning of winter, unless they are provided promptly.

Cincinnati, O., Aug. 30, 1888.

ORIGIN OF HONEY.

Where does the Honey come from?

Written for the American Bee Journal

BY JAMES HEDDON.

There have been many interesting articles written under the title of "Where honey comes from," and after reading them all, I can think of no heading more appropriate to my understanding of the matter, than "Where *does* honey come from?" After last season's severe drought, we had something less than half the usual white clover bloom, and the basswood bloom was an average one. From all I know after twenty years' experience, I should not have had much if any different weather during the above blooming, could I have fixed it my own way. But now, strange to say, of white clover honey we get almost none, and no more than one-sixth of the crop of basswood, nearly all of which was taken in the extracted form.

For the last four years we have secured but little amber honey which comes from buckwheat and weeds, during the months of August and September, and we credited the failure to the droughts which occurred each year. Now this year we have the same August drought as bad as ever, and we have almost an average yield of this so-called "fall honey." Buckwheat yielded well, right in the drought. Now I am nonplussed; my observations would lead me to say to a novice who might ask me where honey comes from, that "it just comes out of the air;" and if he asked me under what conditions, I might say, "when it wants to."

The pleurisy-root which I have written about, as the best honey-plant I am acquainted with, actually shared the fate of the clover and buckwheat of this season, at least to a certain extent. Certainly the bees worked on it, con-

stantly, never leaving it for basswood, but it was exceptional rather than in all blossoms, as heretofore, where you could see the drops of honey standing.

Poor Seasons are Blessings.

The last two very poor honey seasons, will, I am confident, prove a blessing to bee-keepers. It has given us old veterans a splendid education; it has taught us how to make the most of disaster; it is a valuable acquisition to know how to make the most out of our business when good luck favors us, and it is also equally valuable to know how to make the most during disastrous seasons. Besides this, the markets are cleared out, consumers are getting the habit of paying a little more for their honey, and better than all, producers as well as consumers, are finding out that bees do not "work for nothing and board themselves," but that intelligent labor and capital are needed to make our business remunerative.

The quality of honey in this section is some better than that of last year. We shall strive to winter our bees to the best of our ability, believing that honey-production offers more inducements at the present time, than at any time during the past few years.

Dowagiac, Mich.

TIERING UP.

My Method while Working for Comb Honey.

Written for Gleanings in Bee-Culture

BY G. M. DOOLITTLE.

The usual plan of working for comb honey is what is known as the tiering up system, and without doubt there are more who use this system than there are of those who use all other systems combined; yet this does not certainly make it true that this plan is the best one there is, by any means. It often happens that the majority is not in the right, and so, after I had proven to my entire satisfaction, that there was a better plan to work on, in producing comb honey, than the tiering-up system, I forsook the same and turned my attention to other plans. My chief objection to the tiering-up plan was that not so much honey could be obtained by using it; and, worse than all the rest, if the utmost care was not used, the result would be lots of unfinished sections in the fall. These unfinished sections have been an eye-sore to all the users of this plan, as the immediate past will testify, for many are so disgusted with them that they recommend that they be burned up, while a whole issue of one of our bee-periodicals, is used in telling how to save them by way of feeding back extracted honey, in order to get them filled.

The next system most in use is what is termed the "side and top storing plan combined," which I adopted upon leaving the tiering-up plan. By the use of this plan, more honey can be obtained than by any other plan I know of, except by using the lateral plan, of which I shall soon speak. The trouble with the side and top storing plan was, that it required much work; yet, as I go over the results of the past while using it, I am convinced that the extra amount of honey obtained by it more than paid me for all the extra work the plan required, over the tiering up plan. An average yield of over 80 lbs. of comb honey per colony, for a period of 15 years, is a record never attained by any of the advocates of that plan.

A few years ago D. A. Jones came out with a wholly side-storing plan, the young brood to be kept in the center of the hive by means of perforated zinc, while the sections were to be placed between that and the older brood, which was to be kept on the outside. One trial of this proved, so far as I was concerned, that the plan was fallacious; and although he told us he would explain, some years ago, I have never seen a word from him on the subject since; hence I have not enumerated this in the above three plans at all.

While working with the side and top storing plan I left a passageway under the side sections, so that any bees which might be scattered around over the top and side of the hive, after any manipulation, could get back to the cluster, instead of dying there, as is the case where no means of outlet is provided. This caused many to write me, asking if I meant to have this so; "for," said they, "the bees will go around under these side sections, up into the cap over them, and build comb there, which they fill with honey." I told them that this was as I wanted it, giving the reasons for so leaving it, and telling them if any colony so persisted in doing, to give more room by adding sections at the sides.

Well, I often got caught in this same fix myself, when I would be a little tardy in keeping up with the bees, so that I have often had from 5 to 15 pounds of honey built in the cap of the hive, the bees having to travel from 25 to 30 inches entirely away from the brood to get there. This leaving the brood and storing honey in such amounts in the cap, led me to adopt what I term the lateral plan of obtaining section honey, which plan gives me fully as much honey as could be obtained by the side and top box plan, with as little work as is required when using the tiering-up plan.

The larger part of my hives are of the kind known as the "chaff hive," which gives plenty of space on top for all the room required by the largest colony, without tiering up. Over the top of these hives I have placed a queen-excluding honey-board, the queen-excluding part going over only the brood apartment to the hive, the rest being a thin board to cover up the chaff. When the honey season arrives this is put on (quilts being used, together with sawdust cushions up to this time), and from three to five wide frames, holding four 1¼-pound sections each, are placed directly over the brood. As soon as these are well occupied with bees at work, I add one or two wide frames at each side; and when these are satisfactorily occupied I add enough more to cover the top of the hive if so much room is needed. In this way I accommodate the size of the colony with the needed room, neither giving too much nor too little, as must of necessity occur where the T super and others of a set capacity are used.

As soon as the first that were put on are filled, they are taken off (handling by the wide frame only, so five pounds are handled instead of single boxes), when the partly filled sections at each side are slid along on the honey-board till they come together in the center, when the empty ones are placed at the sides.

As the honey season draws to a close no more empty sections are put on, so that, when the season is over, I often have but one or two wide frames or sections on the hive, thus doing away with more partly filled sections than I really need for bait sections the following season.

Borodino, N. Y.

FOUL BROOD CURE.

The Sulphuric Acid and other Methods of Cure.

Written for the American Bee Journal

BY GERD WENDELKEN.

Many substances can be used as a remedy for foul brood, but the question is, which is the best? Salicylic acid and carbolic acid, associated with borax and alcohol, is recommended by Mr. Muth and Mr. Kohnke, as the best remedy, but some other beekeepers have found them of no use. The failures, I think, are caused by wrong methods which they pursued. The attempt to cure foul brood by spraying the infected hive and combs with diluted salicylic or carbolic acid is uncertain, because we may spray too much or not enough; and in addition to this it is very troublesome to apply it, besides having a chilling effect on the colonies, and is often a mischief instead of a benefit. The worst of all is the fact, that when applied to hives and combs, we start robbing, and bees from other hives visit the combs under treatment, and take the spores home with them, and by the time one colony is cured, some of the others are infected; therefore I always have been in favor of the remedy being given in the food, and provide the bees with the drug, and the bees will give it to the larvæ.

Methods of Curing Foul Brood.

Mr. Stachelhausen recommends carbolic acid mixed with wood-coal and tar. He puts this on felt paper in the hive on the bottom-board, and moistens the front at the entrance with it about twice a week. He disinfects every hive in the yard whether diseased or not diseased. The vapor of this stuff, he says will prevent the spread of the disease from four to six months. After this is done, he commences to cure the diseased colonies, by feeding every diseased one with medicated syrup, as Mr. Muth has recommended.

Mr. Cheshire recommends carbolic acid, 1 part to 500 parts of syrup, and he has cured foul brood by feeding it to diseased bees.

I prefer sulphuric acid when mixed 1 part to 700 parts of syrup, and fed to the bees; because the cure is easier, quicker and cheaper. The price of one ounce of salicylic acid is 50 cts., one pint of the best quality of alcohol cost 90 cts. —in all $1.40. Now one ounce sulphuric acid costs only from 5 to 10 cents, and the curative effect will go as far as the other acids do. With little expense and little labor, I cured my foul broody bees in Germany in 1838 (50 years ago), and I think that I can do it yet; because there is no difference between foul brood in Germany and in America.

Several prominent beekeepers have recommended to give the foul bees a new, clean hive with foundation; treat them as a new swarm, and burn the combs of the foul brood. I have no doubt that foul brood can be cured by this method, but it seems to me unnecessary, and it is doubtful to me that the cures by burning, spraying, and starvation would pay.

Marietta, O., Sept. 1, 1888.

SCIENCE.

Indefensibility of Criticising True Science.

Written for the American Bee Journal

BY PROF. A. J. COOK.

I was surprised and as deeply pained, to read the article from our friend, Mr. G. W. Demaree, on page 568. Prof. Wiley's article in the *Popular Science Monthly* was not science. It was worthy censure, for it taught glaring mischievous error, and dressed this in science's garb. But to censure or ridicule true science is like discourtesy or rudeness to one's mother—utterly indefensible. Science has been one of the most potent factors in the Nineteenth Century civilization. To it we are all indebted more than we can tell. What base ingratitude, then, to defame it. "How worse than an aching tooth is a thankless child."

Honey is "Digested Nectar."

I was also surprised that the same gentleman should contradict one of the demonstrated facts of science—that honey *is* digested nectar. "No uncrazed thinker on the earth possessing brains enough to frame a thought could believe such an impossibility." That is a strong sentence for a man of Mr. Demaree's intelligence. He might as well say the same of the belief that I can talk with, and recognize the voice of, a friend 200 miles distant. Oh, friend Demaree! "There are more things in heaven and earth than are dreamt of in your philosophy." Nectar is neutral; honey is acid. Nectar is cane-sugar; nectar invert sugar. *They are not the same.*

That all honey is equally digested is very likely not true; but that honey is more or less perfectly digested nectar is as certain as that the world is round. To proclaim truth, should do injury to no man or industry; if it does, all the worse for the man or the industry.

Agricultural College, Mich.

QUEENLESSNESS.

Removing Queens from Colonies to Save Honey.

Written for the American Bee Journal

BY ALEX. W. STITH.

On page 504, is an article from my pen, on removing queens to save honey, and I will say, in "justice" to myself, that it was meant for surplus alone; I produce only extracted honey, and to this only, I intended the rule to apply.

On page 521, appears an article by W. Z. Hutchinson, embodying nearly the same principles, yet differing somewhat in its practicability, both he and I seemingly unaware of each other's production, as they were published on nearly the same date, and the reader will be left to solve the problem.

But lo, there ariseth the "wise man of the East"—Mr. Friedemann Greiner, who has an article on page 538. He is probably not as well known to the readers of the BEE JOURNAL as Baron Von Berlepsh, Dzierzon and others, to whom he refers so much. Mr. G. seems free to let Mr. Hutchinson alone, but perhaps Mr. H. is too good authority to tackle, if he does not "cage the queen." But Mr. G. seems ready to correct one whom he may consider a "mossbacked Kentuckian," with the experience and conclusions of Dzierzon, Hilbert, and Pollmann, but at the same time disregarding the advice of the great Baron Von Berlepsh, whose untiring investigations I have no reason to disregard; and with due justice to the above distinguished apiarists, I will say that if the idea originated with Berlepsh, or any one else, why, Mr. G. will please flatter the right one (or himself, as the dictates of his conscience will permit).

I have been a reader of the BEE JOURNAL, if I mistake not, for the past eight years, and I had not seen in print, prior to my article alluded to, the method I described, and I am not so desirous of notoriety as to state anything but facts which developed under my own observation, Mr. G's. article on page 538, to the contrary notwithstanding.

I am aware that myself or Mr. G's. writing the experiences and conclusions of others will not interest the reader; if it would, why need we go to Europe or South America? Have we no practical or scientific bee-keepers in the United States, to test the method described? Where are our Cooks, Newmans, Heddons, Doolittles, Secors, Abbotts, Demarees, and many others whose names are so familiar, and whose scientific researches and practical experiences have been of so much benefit to the agricultural world—perhaps as much as those renowned pioneers of Europe, whose talent no one appreciates more than I?

What I may write on bee-keeping is for the sole purpose of benefiting bee-keepers in general (especially the novice), and it is from my own experience in managing an apiary, consisting of from 50 to 100 colonies each year, for the past ten years—in Kentucky, not Germany, or South America, or in the State of New York. I write of what I have tested to my own satisfaction in my own apiary, and I will practically answer all of Mr. G's. criticisms, but respectfully request him, to describe his own experience in detail, of "caging queens" in full colonies, to be smothered by her own bees in extreme hot weather, such as we have in the months of July and August. Probably such procedure may do in New York, but not in Kentucky.

In conclusion I will add that no one enjoys a friendly discussion more than I, for in a diversity of opinion the reader is most likely to be enlightened. So my thanks are hereby tendered to Mr. G., not for his practical method of "caging queens," but for criticizing my error, if it is one.

Portland, Ky.

OLD COMBS.

The Condition of the Bees in Northern Iowa.

Written for the American Bee Journal

BY WILLIAM CLEARY.

Generally speaking, bees wintered well here last winter, but got very weak in the Spring, and some dwindled. It was so wet until the middle of June, that they did not get enough to keep up breeding. We got no honey from white clover, and very little from Basswood. There was no surplus, and on August 1, half the bees in the county did not average two lbs. per colony. We were "blue," but with buckwheat and fall flowers they have stored about 20. lbs per colony so far this month. Some of my neighbor's bees have been swarming continually for the last three weeks, and he has cut out all the queen-cells several times, but they would swarm the next day, and every fine day. I increased my bees one-third by dividing. They have not swarmed, but are in good working condition now—about as they should be in June in a favorable season. We expect very little surplus unless the fall is extra good and late. I want to ask a few questions:

1. Would you use old black comb that the bees died in, or empty frames, if the combs were straight and otherwise good? Last year and this I hived most of my new swarms on old comb, and a neighbor put his on new empty frames, and he got the most honey. I have almost lost faith in saving old combs.

2. Some say that you can keep the bees from swarming by cutting out queen-cells; but my neighbor cannot. Why is it?

3. Is it advisable to keep putting bees back, where they persist in swarming in June and the first of July?

4. I noticed a great many small shiny bees, and my neighbor spoke of the same thing. What were they, and what caused them? They were mostly among weak colonies. They died, or were killed off, as they are all gone.

5. I also noticed that when there was no honey coming in for several days, the bees left some brood they did not cap over, and I found dead brood in

some hives. Was this caused by the lack of honey? They had plenty of pollen all summer, but there was no honey in the bloom until now.

We are having a dry spell; the basswood yielded very little, as it was very late and lasted only a few days.

6. What way should the wind prevail, to have the best honey-flow?

Algona, Iowa, Aug. 30, 1888.

[1. We prefer to use comb foundation, rather than any "old black combs." It is false economy.

2. That is the usual method of the prevention of swarming—but when the "swarming fever" is on them it is difficult to control them.

3. To persist in putting the bees back, sometimes results in the loss of the swarm, by their going to the woods without alighting.

4. They are old bees and are often found in strong colonies, but soon disappear—dying of old age.

5. During a dearth of honey, the bees sometimes not only leave the brood uncapped but actually put it out and destroy it—thereby preventing any increase to consume the failing stores in the hive.

6. We have often noticed that no honey is gathered unless the wind comes from the south, southeast or southwest.—ED.]

FUMIGATION.

Bi-Sulphide of Carbon for Comb Fumigation.

Written for the American Bee Journal

BY G. R. PIERCE.

While looking over some of the back numbers of the AMERICAN BEE JOURNAL a short time ago, I noticed a query in regard to the best method of protecting spare combs, as well as surplus honey, from the ravages of the larvæ of the bee-moth. The reply to the question, describes the method usually adopted by bee-keepers to accomplish this purpose, *i. e.*, to expose the combs to the fumes of burning sulphur, in a closed room.

In my experience I have found the above method to be crude, more or less troublesome, and by no means reliable, unless the bee-keeper has an apartment that is suited to the purpose; and even then, if the worms have obtained a *foot-hold*, or if the quantity of comb to be fumigated is small, the trouble and labor expended by this method is greater than the benefit derived from the comb.

The principal objection to sulphur fumigation is, that combustion cannot be well regulated. If a small quantity is used, it is soon consumed, and the effect is not lasting enough; but, if on the other hand a larger quantity is used, care must be taken lest a conflagration be the result.

Another objection is, that sulphur will not burn readily except in connection with substances that are rich in carbon, *i. e.*, dry wood, resin, charcoal, lycopodium, etc.; and, as these substances are not chemically united with the former, when the oxygen of the air is insufficient in quantity to oxidize both elements, the carbon will take the most, leaving little or none to unite with the sulphur, to form sulphurous acid gas—the larvæ destroying agent.

As has been intimated above, the object of burning sulphur is to generate sulphurous acid gas, a most potent agent for destroying parasitical life, both animal and vegetable. It is true that there are other substances which would prove equally efficacious, as far as merely destroying the larvæ is concerned, but they are not available; either on the score of economy, or because they would render the combs unfit for the further use of the bee.

A few years ago, having occasion to fumigate some spare combs, and not being satisfied with the methods described in the different works on bee-keeping, I conducted a series of experiments with a view to find some simple and more reliable way to accomplish the object sought. After many trials with different substances—the details of which is not necessary to consider—I decided that the most satisfactory results were obtained by the combustion of bi-sulphide of carbon.

As I have stated, the main objection to sulphur is, that its combustion cannot readily be regulated. The first step, therefore, was to obtain a solution containing sulphur which might be burned in a lamp; this would enable the operator to continue the fumigating process at will, as well as to confine the sulphurous acid evolved, to a very small space if desirable—as it would be when the quantity of comb to be exposed was small.

At first thought, sulphuretted oil (Sulphuretted oil is made by dissolving sulphur in hot oil. As the latter cools, most of the sulphur is precipitated. It is sometimes called "balsam of sulphur") would seem to have a composition that would burn readily in a lamp, and so, indeed, it would when in a free circulation of air, but when ignited in an enclosed space, the products of combustion were mainly carbonic acid gas, sulphur soot, etc. The trouble in this case also was, that the oil was too rich in carbon, especially when the lamp was burned in an enclosed space, the carbon appropriating nearly all of the oxygen, leaving very little to unite with the sulphur.

The foregoing experiments not being successful, I now turned my attention to bi-sulphide of carbon, to consider its possibilities as a fumigating agent. This substance is a clear, colorless liquid, with a peculiar fetid odor; volatilizes quite rapidly at ordinary temperatures if exposed to the air; and boils at about 118.5 per cent. Fahr. Its chemical formula is $C S_2$; contains 15.78 per cent. of carbon, and 84.21 per cent. of sulphur. It should be kept in a cool place, and under no circumstances should the container be opened near a flame.

The main difficulty experienced in using bi-sulphide of carbon as a fumigating agent was, to devise a lamp in which it would burn safely, for it is so inflammable that in one of ordinary construction the liquid in the fount would surely ignite from the flame of the wick; this trouble being overcome, the trial was a success in every particular.

I have no hesitation in saying that fumigation with bi-sulphide of carbon will commend itself to every enterprising apiarist who will give it a fair trial; a careless man, however, should never handle it, as it is a bad thing to play with, but with care it is as safe as kerosene or any other illuminating oil.

The price of bi-sulphide of carbon varies according to the quantity purchased. The quotations are from 20 to 30 cents per pound, wholesale. I have seen it quoted at 15 cts. per lb. in 5 lb. bottles, the price of the bottles added. It is only persons in the wholesale trade who can buy at these prices, but if the bee-keeper will buy the article in unbroken packages, he can probably obtain it from the local druggist at a comparatively small advance.

Blairstown, Iowa.

WINTER FOOD.

The Relation of Food to the Wintering of Bees.

Written for the Bee-Keepers' Review

BY W. Z. HUTCHINSON.

All are agreed that for the successful wintering of bees in our Northern States, good food is of the first importance; but as to how this shall be best secured, there is some difference of opinion. Pure cane-sugar properly prepared, or fed early enough to give the bees time to prepare it, stands unrivalled as a winter food for bees.

Dr. Miller says his bees made a "poor stagger" in wintering upon sugar last winter, but admits that the same might have been the case had honey been fed instead of sugar, and that sugar fed in the right time and in the right place is probably a safe food. The Doctor asks, who has practiced taking away all natural stores and feeding sugar, and met with unfailing success? I have, Mr. Heddon has, many others have; in fact we feel like asking the Doctor who has not, when the bees are wintered in a temperature ranging from 35° to 50°?

When I was at Mr. Heddon's last spring, he read a letter just received from Mr. C. E. Boyer, of Ainger, Ohio, in which he recounted heavy losses of sugar-fed colonies that had been kept in a warm cellar. It was the first instance of the kind that had come to our knowledge. It was a puzzle to us, and is yet; that is, if the sugar was pure. As a general thing, I think it better that the sugar be fed early, but it can be given late and yet have the bees winter well.

It was Mr. E. J. Oatman, I believe, who once fed sugar so late, to 200 colonies, that it was not sealed over at all, yet they wintered well in a cellar. If fed early the bees have an opportunity

to handle it over, and in this handling, its character is somewhat changed by the addition of the secretions from their glands. There is also an opportunity of sealing over the syrup, when it is less likely to be injured by changes in temperature, moisture, etc. If fed late, the syrup must be made thick, as the bees have no time to evaporate it; and there must be something added to prevent the syrup from crystallizing. After repeated trials I give my preference to honey. From ten to twenty per cent. of honey is sufficient. I never want to be put to the trouble of extracting the honey in the fall before feeding sugar, and, if contraction of the brood-nest is properly managed, the combs will be perfectly free from honey at the end of the honey harvest; when, with Heddon feeders, oil-stoves to prepare the syrup, and the proper utensils, feeding is never dreaded in this "family."

Two or three years ago I experimented by feeding and preparing for winter a few colonies each day. I began the latter part of August and continued feeding a few colonies each day until nearly the middle of October. All wintered equally well, except the last few colonies that were fed. I think that September is early enough to feed. When feeding has been neglected until it is so late, and the weather so cool that the bees will not leave the cluster and go up into a feeder, it may be managed by filling the feeder with hot syrup and placing it *under* the hive. The heat from the syrup will warm up and arouse the bees, when they will come down and carry up the feed.

But all cannot, or may not wish to, use sugar for a winter food, and I have done my best to help them. I especially recommend the views of Mr. O. O. Poppleton. According to his idea, those who have been so successful by saving out combs of early-gathered honey upon which to winter their bees, may attribute their success to the fact that the early honey harvests were very abundant, while the fall flow was scanty. Mr. J. H. Martin unconsciously voices that idea when he says: "I find that good buckwheat honey will winter bees better than honey from a great variety of fall flowers." Possibly the honey, in a slight flow, becomes more heavily charged with pollen. Candied honey or thin, watery honey is an unfit food for bees long confined by cold. As a rule, honey-dew furnishes a poor winter food. To those whose management is such that their bees must winter upon natural stores, we would say, see to it that the stores are from the most bountiful flow, well ripened and sealed, and you have done all that you can do.

Dr. Miller asks for an explanation of why bees have starved with an abundance of pollen within easy access, and yet showed no signs of diarrhœa. I would say that I suppose bees can live but a short time without honey, that upon pollen alone they would soon starve—before enough would be consumed to overload the intestines. In other words, if bees had access to pollen only, they would eat but very little of it, and the result would be starvation rather than overloading the intestines.

Flint, Mich., Sept. 1, 1888.

CONVENTION DIRECTORY.

1888 *Time and Place of Meeting.*

Oct. 3-5.—North American, at Columbus, O.
W. Z. Hutchinson, Sec., Flint, Mich.

Oct. 11, 12.—Union, at Clayton, Ills.
S. N. Black, Pres., Clayton, Ills.

Dec. —.—Michigan State, at Jackson, Mich.
H. D. Catting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

Plan for a Bee-House.—Chas. D. Barber, Stockton, N. Y., on Aug. 31, 1888, says:

I want to build a bee-house. Will some one who has one, or who knows, please give a description of it in the BEE JOURNAL? How high, wide and long should it be? I want it for 20 to 30 colonies. Honey is selling here for from 12 to 15 cents per pound.

Protectors of the Bees.—F. M. Herrick, Woodstock, N. Y., on Sept. 2, 1888, writes:

I desire to become a member of the National Bee-Keepers' Union, as I fully indorse all its principles, and realize that in union only is there strength to protect an honest industry. I do not think that I shall ever have any trouble myself, but others may, and I wish to cast my lot with the protectors of the bee. The proceedings of the city authorities in the Arkadelphia case, brings to my mind amusing thoughts, and begging clemency with hope of escaping immediate execution (from the editor) I will submit the following:

Some folks there are with critic spleen
Like dogs, who bark at things unseen;
Not knowing what the bee was made for,
From whence it came, or what it staid for;
They think some enemy hath sent it,—
Thus take occasion to resent it.

How to Control Swarming, etc.—J. F. Elkenberry, Green, Iowa, on Aug. 3, 1888, says:

I took out of my out-door cellar, 27 colonies in good condition in the spring, and lost 6 colonies by spring dwindling. It was very cold and wet so long, that bees could not do anything until June. They commenced to swarm the first of July, and have kept it up until now, a swarm having issued yesterday. I wish that some one would tell me how to control swarming. My bees have done well the last month, and are still working faithfully in the sections. I have now 37 colonies all doing well.

Virgin Queens—Fall Prospects.—G. W. Demaree, Christiansburg, Ky., on August 31, 1888, says:

In answer to query 511, on page 566, I wished to say, "the virgin queen lays *no* eggs until her amatorial period has passed." The omission of the word "*no*" changes my meaning to the reverse of what I intended to say. We have had an abundance of rain since Aug. 16, and there is now fair prospects of fall honey for winter stores, to say the least. The young white clover is partially saved.

Working on Buckwheat, etc.—I. N. Rogers, Jackson, Mich., on Aug. 31, 1888, writes:

So far this has been a very poor honey year for this (Jackson) county. But very few had any white clover honey stored in the sections, and the present indications are that but little fall honey will be obtained. I have 5 colonies that have given me 24 pounds each, gathered from buckwheat, for which I readily obtained 20 cts. per pound. My bees are still working lively on a piece of buckwheat, sown late expressly for them. I would say in regard to bees working on buckwheat, that I have grown it for several years (as much for the bees as for the seed), and have observed that, on a hot, sunshiny day, bees work on it only in the forenoon; but if the day be cloudy and warm, they will work on it the greater part of the day. Only about one-fourth of the bees put into winter quarters last fall, were alive when fruit trees commenced to bloom last spring, and the most of them were very weak. I put 26 colonies into the cellar; I had 19 in chaff hives, and had but 9 colonies to commence the season with—the first loss of any consequence, that I ever met with. Everything is drying up, not having had any rain to speak of, in this immediate vicinity, since early in June.

Bees are Busy.—Geo. G. Scott, Wadena, Iowa, on Sept. 4, 1888, says:

My bees have gathered about 20 lbs. of honey per colony, spring count. The season's yield in this section may be estimated at about half a crop. Fall flowers are yielding well, and bees are very busy.

Small Average per Colony.—D. L. Shapley, Randallsville, N. Y., on Aug. 6, 1888, says:

Bees have got through putting the honey into the sections for this season. It is the poorest season I have seen in six years. I shall not have over 50 lbs. of surplus honey from 6 colonies, spring count; and my bees have done as well as any in this vicinity. There is no honey here to speak of, this year. The average per colony is only about 5 pounds of surplus, and of poor quality at that.

Blessing in Disguise—Increase.—E. B. Morgan, Cleveland, Iowa, on Aug. 31, 1888, writes:

The honey crop in this locality (southern Iowa) is very poor. Different bee-men have told me that they have no honey. The spring was too wet and cold, and the white clover yielded but little; the heads being so loose and straggly; they had lost that symmetrical shape, but I see that the fall clover, or the clover now in bloom, has resumed the old shape. Quite a number of the bee-men feel despondent, and I think I will class myself among them. Still, we had better look upon the bright side, as Dr. Mason says "that two poor seasons may be a blessing in disguise." One thing is sure, that quite a number of our farmer bee-keepers that kept from 10 to 20 colonies are swept out of existence, and have their ill-shaped hives for sale. My 50 colonies are in good condition for winter. The question of preventing increase, that has caused so much study and anxiety to many will, I think, soon be settled. I think that the principle is already discovered, but not being quite sure as to its results, having had such poor season, we must wait; but one thing is sure, it will not be caging old queens and keeping them over from year to year. Young queens for fertility, hence strength of colonies and honey; old queens for drones and swarming.

AMERICAN BEE JOURNAL
ESTABLISHED IN 1861 — OLDEST BEE PAPER IN AMERICA

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Business Notices.

If You Live near one post-office and get your mail at another, be sure to give the address that we have on our list.

Hilton's new pamphlet on Comb Honey Production has been reduced in price to 5 cents. For sale at this office.

If you Lose Money by carelessly enclosing it in a letter, it is without excuse, when a Money Order, which is perfectly safe, costs but 5 cents.

Paper Boxes—to hold a section of honey for retail dealers. We have two sizes on hand to carry sections 4¼x4¼ and 5¼x5¼. Price, $1.00 per 100, or $8.50 per 1,000.

Preserve Your Papers for future reference. If you have no **BINDER** we will mail you one for 60 cents; or you can have one FREE, if you will send us 3 new yearly subscriptions for the BEE JOURNAL.

Yucca Brushes, for removing bees from the combs, are a soft, vegetable fiber, and do not irritate the bees. We supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage.

Please write *American Bee Journal* on the envelope when writing to this office. Several of our letters have already gone to another firm (a commission house), causing vexatious delay and trouble.

Pure Phenol for Foul Brood.—Calvert's No. 1 phenol, mentioned in Cheshire's pamphlet on pages 16 and 17, can be procured at this office at 25 cents per ounce. Not being mailable, it must be sent by express.

Apiary Register.—All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and begin to use it. The prices are as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

Photographs of Bee-Keepers.—The "medley" gotten up by E. O. Tuttle, containing the faces of 131 representative apiarists, and a printed sketch of each one, will be sent with the BEE JOURNAL for one year for $1.75; or we will present it *free*, by mail, to any one, for a club of three subscribers and $3.00.

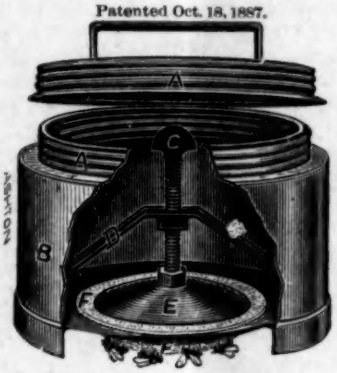
CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	1 50	1 40
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	1 50	1 40
The Apiculturist	1 75	1 60
Canadian Bee Journal	2 00	1 80
Canadian Honey Producer	1 40	1 30
The 8 above-named papers	5 65	5 00
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 75	1 50
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
Iowa Homestead	2 00	1 90
How to Propagate Fruit	1 50	1 25
History of National Society	1 50	1 25

Hastings' Perfection Feeder.—This Feeder (illustrated) will hold 2 quarts, and the letting down of the feed is regulated

Patented Oct. 18, 1887.



by a thumb-screw. The cap screws securely on. It is easy to regulate—either a spoonful or a quart—and that amount can be given in an hour or a day, as desired. By it the food can be given where it is most needed—just over the cluster. Not a drop need be lost, and no robber bees can get at it. A single one can be had for 40 cents, or a dozen for $3.50, and it can be obtained at this office. Postage 10 cents extra.

Cork for Winter Packing.—Its advantages are that it never becomes *musty*, and it is *odorless*. Cushions can be made of cloth and filled with the cork, for winter packing. We can supply all orders now at 10 cents per pound. Or a seamless sack of it, containing 15 pounds, for $1.00.

Please to get your Neighbor, who keeps bees, to also take the AMERICAN BEE JOURNAL. It is now so CHEAP that no one can afford to do without it.

Can You Do Anything that will do more to advance and defend the pursuit of bee-keeping, than to aid its Weekly Exponent and Defender? The AMERICAN BEE JOURNAL is the pioneer bee-paper of America, and is fully entitled to the active support of every progressive apiarist, for it works constantly and faithfully for the best interests of the pursuit. We therefore specially request all our readers to use their influence to double our subscription list during the coming autumn. Reader, will you please send us a new subscription with your renewal or before that time? A good weekly at one dollar a year is surely cheap enough to command patronage.

Red Labels for Pails.—We have three sizes of these Labels ranging in size for pails to hold from one to ten pounds of honey. Price, $1 for a hundred, with the name and address of the bee-keeper printed on them. Smaller quantities at one cent each; but we cannot print the name and address on less than 100. Larger quantities according to size, as follows:

	Size A.	Size B.	Size C.
250 Labels	$1.50	$2.00	$2.25
500 Labels	2 00	3.00	3.50
1,000 Labels	3.00	4.00	5.00

☞ Samples mailed free, upon application.

Clover Seeds.—We are selling *Alsike Clover Seed* at the following prices: $8.00 per bushel; $2.25 per peck; 25 cents per lb. *White Clover Seed:* $10.00 per bushel; $2.75 per peck; 30 cents per lb. *Sweet, or Melilot, Clover Seed:* $6.00 per bushel; $1.75 per peck: 20 cents per lb.—by express or freight.

Exchange.—We will accept Honey and Beeswax in exchange for Bee-Keepers' Supplies in any quantity. Those desiring to make a trade are invited to correspond with us, stating quantity, quality, and price, and the goods they want in exchange.

Alfalfa Clover.—For habits and cultivation of this honey-plant, see page 245. We supply the seed at the following prices:—Per lb., 22c.; per peck, $3.00; per half-bushel, $5.50; per bushel of 60 lb., $10.00. If wanted by mail, add 10 cents per pound for bag and postage.

We Supply Chapman Honey-Plant **SEED** at the following prices: One ounce, 40 cents; 4 ounces, $1; ¼ pound, $1.75; 1 pound, $3. One pound of seed is sufficient for half an acre, if properly thinned out and re-set.

The Convention.—The pamphlet containing the report of the proceedings of the Union Convention in Chicago, Ills., is published, and can be obtained at this office for 25 cents. Or bound up with the history of the International Society, and a full report of the Detroit and Indianapolis conventions, for 50 cents, postpaid.

Honey and Beeswax Market.

NEW YORK.

HONEY.—We quote: Fancy white 1-lbs., 17@18c.; 2-lbs., 13@14c. Fair white 1-lbs., 15@16c.; 2-lbs., 11 to 12c. Extracted, white, 7½@8c.
Sep. 5. THURBER, WHYLAND & CO.

NEW YORK.

HONEY.—Fancy white 1-lbs., 17@18c.; off grades, 15@16c. Fancy white 2-lbs., 13@14c.; off grades, 12c. Extracted, white, 7½@8c. New crop is arriving and demand is good.
BEESWAX.—23@23½c.
HILDRETH BROS. & SEGELKEN,
Sep. 5. 28 & 30 W. Broadway, near Duane St.

SAN FRANCISCO.

HONEY.—White 1-lb. sections, 12@15c.; 2-lbs., 11 to 14 cts.; amber, 7@9c. Extracted, white, 5½@6c.; light amber, 5@5½c.; amber and candied, 4½@4½c. Receipts light and market firm for best qualities.
BEESWAX.—17@21c.
Aug. 25. O. B. SMITH & CO., 423 Front St.

DETROIT.

HONEY.—Best new white comb, 15@16c, with little in sight and slow sales. Market is low, and beekeepers will do better to hold honey until approach of cold weather.
BEESWAX.—21@22c. Supply limited.
Aug. 22. M. H. HUNT, Bell Branch, Mich.

CHICAGO.

HONEY.—New crop offered at 16@17c., demand being very light yet. Extracted is not in much demand, and prices are nominal at 7@8c. for the best grades.
BEESWAX.—22c. R. A. BURNETT,
Aug. 14. 161 South Water St.

CHICAGO.

HONEY.—None here, and market in good condition for new crop. There is some demand for the extracted.
BEESWAX.—22c.
Aug. 2. S. T. FISH & CO., 189 S. Water St.

CINCINNATI.

HONEY.—We quote extracted at 5@8c. per lb., for which demand is fair. Comb honey, 12@15c. Some small lots have sold at 14@16c. Market quiet.
BEESWAX.—Demand is good—20@22c. per lb. for good to choice yellow, on arrival.
Aug. 24. C. F. MUTH & SON, Freeman & Central Av.

KANSAS CITY.

HONEY.—Choice 1-lb. sections, 18c.; dark 1-lbs., 14c.; 2-lbs., 16c.; dark, 13c. White extracted in 60-lb. cans, 8c.; amber, 7c.; in barrels and kegs, 5@8c. Demand good, prices firm, and stock light.
BEESWAX.—None in market.
Aug. 29. HAMBLIN & BEARSS, 514 Walnut St.

NEW YORK.

HONEY.—We quote: Choice white clover and basswood extracted, 7½@8½c.
Aug. 29. F. G. STROHMEYER & CO., 122 Water St.

BOSTON

HONEY.—We quote: New 1-lb. sections, 18@20c.; 2-lbs., 14@16c. New extracted, 8@10c.
BEESWAX.—25 cts. per lb
Aug. 24. BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—We quote: Extracted, white, 5½ cents; light, 5¼c.; amber, 4½@5c. Comb, 1-lbs., 12@14c.; 2-lbs., 9@13c., as to quality. Arrivals not large, and supplies held firmly.
BEESWAX.—Dull at 19@22c.
Aug. 20. SCHACHT & LEMCKE, 122-124 Davis St.

KANSAS CITY.

HONEY.—We quote: New white 1-lbs., 18c.; light 1-lbs., 16c. California white 1-lbs., 18c.; light 1-lbs., 16c.; white 2-lbs., 16c.; light 2-lbs., 14c. Extracted, white, 8c.; amber, 7c.
BEESWAX.—18@20c.
Sep. 5. CLEMONS, CLOON & CO., cor 4th & Walnut.

ST. LOUIS.

HONEY.—We quote: Extracted, 4½@5½c.; if in cans, 8@9c. White clover comb, 14@15c. Market is steady and receipts light.
BEESWAX.—21c. for prime.
Sep. 6. D. G. TUTT & CO., Commercial St.

MILWAUKEE.

HONEY.—New white 1-lb. sections 18c., and very fine, 20c.; 1-lbs. 15@18c.; old 2 and 3 lbs., not salable, 12½@14c.; dark 1-lbs., old or new, 12@13c. Extracted, new white in kegs and ½-barrels, 8@9c.; old, in same packages, 7@8c.; in tin, 8@9c.; dark in barrels or ½-barrels, 6@6½c. Arrivals of new crop small; demand not urgent, and only very moderate trade.
BEESWAX.—22@25c.
Aug. 31. A. V. BISHOP, 142 W. Water S

A Home Market for honey can be made by judiciously distributing the pamphlets, "Honey as Food and Medicine." Such will create a demand in any locality at remunerative prices. See list on the second page of this paper.

Conventions.—The time for holding Bee-Keepers' Conventions has now arrived, and we cannot give any better advice than this: Let each one attend who can do so, and take part in making these meetings interesting and instructive. If you have not already obtained the "Bee-Keeper's Convention Hand-Book," do so at once to post yourself up on how to conduct such meetings correctly. It contains a simple Manual of Parliamentary Law and Rules of Order for the guidance of officers and members of Local Conventions—Model Constitution and By-Laws for a Local Society—Programme for a Convention, with Subjects for Discussion—List of Premiums for Fairs, etc. Bound in cloth, and suitable for the pocket. Price, 50 cents. We will club this book and the AMERICAN BEE JOURNAL for one year for $1.25. It also contains a lot of blank leaves on which you can note important matters as they come up. Do not fail to send for a copy of it.

Simmins' Non-Swarming System.—We have a few of these books left, and we will club them with the AMERICAN BEE JOURNAL for one year, both postpaid, for $1.25. The subscription to the BEE JOURAL can be for next year, this year, or may begin anew at any time.

Colored Posters for putting up over honey exhibits at Fairs are quite attractive, as well as useful. We have prepared some for the BEE JOURNAL, and will send two or more free of cost to any one who will use them, and try to get up a club. Sample copies will be sent free upon application.

We will Present a Pocket Dictionary for two subscribers with $2.00. It is always useful to have a dictionary at hand to decide as to the spelling of words, and to determine their meaning.

New Subscribers can obtain the full numbers for 1887 and 1888, for $1.75, while there are any sets of 1887 left.

Advertisements.

WANTED—Situation. I can manage, or assist in, a practical apiary; can give good references. Please address me. HARRY GALEY,
37A2t GRANBY, PROV. QUE., CANADA.
Mention the American Bee Journal.

WORK FOR ALL $30 a week and expenses paid. Samples worth $5 and particulars free. P. O. Vickery, Augusta, Me.
37A13t
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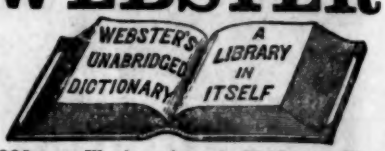

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